



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,501	12/23/1999	FRANCIS BIOLLEY	612.37981X00	7486

20457 7590 02/06/2004

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

PECHHOLD, ALEXANDRA K

ART UNIT	PAPER NUMBER
----------	--------------

3671

DATE MAILED: 02/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/471,501

Applicant(s)

BOILLEY, FRANCIS

Examiner

Alexandra K Pechhold

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-16 is/are allowed.
- 6) ☒ Claim(s) 6,7,9,11,12 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 7, 9, 11, 12, 17, 19, and 20 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Remery (US 4,279,543) in view of Brown et al (US 5,505,560).**

Regarding claims 9, 17, and 20, Remery discloses a flexible riser part seen as flexible tube (6), connected to a point below the surface, and a rigid riser part seen as pipe (3) connected to the flexible riser part and to the floating support as shown in Fig.

1. Pipe (3) appears to have a length equal to half the water depth.

Remery fails to disclose a catenary anchor system applied to the rigid riser part in the vicinity of the junction and/or in the vicinity of the connector between the flexible riser part and rigid riser part, and comprising one or more tendons anchored to a sea bottom. Brown teaches a fluid transfer system for an offshore moored floating unit, wherein at the junction of the upper portion (5) and the lower catenary (6) lies a subsurface buoy (7) connected with line (10) to a clump weight (!1) to the seabed (3) (Col 2, lines 15-30). Brown states that the use of the clump (11) with the tether or line (10) connected thereto keeps the buoyancy body in position (Col 1, lines 50-55). It

Art Unit: 3671

would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pipe of Remery to include a catenary anchor system applied to the rigid riser part in the vicinity of the junction and/or in the vicinity of the connector between the flexible riser part and rigid riser part, and comprising one or more tendons anchored to a sea bottom as taught by Brown, since Brown states in column 1, lines 50-55 that use of the clump (11) with the tether or line (10) connected thereto keeps the buoyancy body in position.

Remery fails to disclose pipe (3) connected to a source of fluid to be injected and tube (6) connected to a point where the fluid is injected, instead disclosing that the device conveys a medium from a fixed position on the bottom below the water surface to an anchored buoy floating on the water (Col 1, lines 7-10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the direction of medium flow in Remery to be from the buoy at the water surface to the fixed position on the bottom, since if it were desired to direct a medium to the bottom of the sea, it would be flow in this direction, and furthermore pipes are known to operate in both directions.

Regarding claim 11, Remery discloses the limitations of the claimed invention as discussed in claim 9 above.

Remery fails to disclose the transfer of fluid between a floating support and a point below the water surface, instead disclosing that the device conveys a medium from a fixed position on the bottom below the water surface to an anchored buoy floating on the water (Col 1, lines 7-10). It would have been obvious to one having

Art Unit: 3671

ordinary skill in the art at the time the invention was made to modify the direction of medium flow in Remery to be from the buoy at the water surface to the fixed position on the bottom, since if it were desired to direct a medium to the bottom of the sea, it would be flow in this direction, and furthermore pipes are known to operate in both directions.

Remery also fails to disclose a catenary anchor system applied to the rigid riser part in the vicinity of the junction and/or in the vicinity of the connector between the flexible riser part and rigid riser part. Brown teaches a fluid transfer system for an offshore moored floating unit, wherein at the junction of the upper portion (5) and the lower catenary (6) lies a subsurface buoy (7) connected with line (10) to a clump weight (11) to the seabed (3) (Col 2, lines 15-30). Brown states that the use of the clump (11) with the tether or line (10) connected thereto keeps the buoyancy body in position (Col 1, lines 50-55). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pipe of Remery to include a catenary anchor system applied to the rigid riser part in the vicinity of the junction and/or in the vicinity of the connector between the flexible riser part and rigid riser part as taught by Brown, since Brown states in column 1, lines 50-55 that use of the clump (11) with the tether or line (10) connected thereto keeps the buoyancy body in position.

Regarding claim 12, the buoyant body (8) of Remery provides additional tension in the tube (6).

Regarding claims 7 and 19, a holding means in Remery can be viewed as joint (2) fastened to the buoy (1), since the pipe is fastened to the buoy with the joint and hangs downwardly from the buoy in the water (see abstract).

Art Unit: 3671

3. **Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remery (US 4,279,543) as applied to claims 11 and 17 above, and further in view of Willis (EPO 0467635 A2).** Remery discloses the limitations of the claimed invention except for heat insulation means placed on at least the rigid part and/or flexible part. Willis teaches thermally insulating compositions and a method of insulating pipeline bundles and pipeline riser caissons. Willis states that it is necessary to insulate pipelines in order to prevent the temperature of the fluid traveling through the pipeline from significantly dropping, and that it is known to apply an inner or outer insulating layer to pipelines (page 2, lines 4-23). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rigid or flexible part of Remery to have heat insulation means as taught by Willis, since Willis states on page 2, lines 4-23 that it is necessary to insulate pipelines in order to prevent the temperature of the fluid traveling through the pipeline from significantly dropping, and that it is known to apply an inner or outer insulating layer to pipelines.

Allowable Subject Matter

4. Claims 13-16 are allowed.

Response to Arguments

5. Applicant's arguments filed 12/24/03 have been considered but are not persuasive.

The applicant argues that there is no motivation to combine the features of Brown with the device of Remery and that the combination proposed by the Examiner is merely hindsight reconstruction based on applicant's teaching. Applicant also argues that, moreover, the use of a fixed anchoring in the device of Remery would defeat the purpose of the device of Remery, which is stated in Column 1, lines 22 - 23 of the document as being to avoid that the "tube may be bent and/or twisted and be loaded with an additional tractive force." Applicant notes that anchoring the lower end of the rigid part to the sea bed would not be compatible with this aim, since an anchoring means would create stresses by limiting the moving of the lower end of the rigid pad.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Remery fails to disclose the catenary anchor system, and Brown provides the motivation to modify the structure of Remery to include such a catenary anchor system, which is well known in the art to provide additional stability. Precisely *because* Remery indicates the potential forces that may act on the known devices, such as forces caused by tide, current, wind, and wave action, which may cause vertical, horizontal, or swinging motions causing bending or twisting (Col 1, lines 15-30), the catenary anchor

system of Brown may help to alleviate such additional motion in order to, as Brown states in column 1, lines 50-55, keep the buoyancy body in position.

Applicant also argues that the combination of Remery and Brown would not teach where a catenary anchor system must hold the pipe, and a person skilled in the art would not be able to determine whether the catenary anchor system must hold the flexible riser part, the rigid riser part, or the junction between the flexible pad and the rigid riser pad. In response, the Examiner emphasizes that this argument is irrelevant since the applicant's claim language merely specifies that a catenary anchor system is applied to the rigid riser part in the vicinity of a junction between the flexible riser part and the rigid riser part or in the vicinity of a connector between the flexible riser pad and the rigid riser part. Fig. 1 of Brown illustrates the line (10) approximately halfway down the fluid line assembly, which would thereby translate to the vicinity of a junction between the flexible riser part and the rigid riser part or the vicinity of a connector between the flexible riser pad and the rigid riser part in Remery.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 3671

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexandra Pechhold whose telephone number is (703) 305-0870. The examiner can normally be reached on Mon-Thurs. from 8:00am to 5:30pm and alternating Fridays from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached on (703)308-3870. The fax phone number for this Group is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.


Thomas B. Will
Supervisory Patent Examiner
Group 3600

2/2/04